



## 17 CFR Part 211

[Release No. SAB 120]

### Staff Accounting Bulletin No. 120

**AGENCY:** Securities and Exchange Commission.

**ACTION:** Publication of Staff Accounting Bulletin.

**SUMMARY:** This staff accounting bulletin expresses the views of the staff regarding the estimation of the fair value of share-based payment transactions in accordance with Financial Accounting Standards Board (“FASB”) Accounting Standards Codification (“ASC”) Topic 718, *Compensation—Stock Compensation* (“Topic 718”), when a company is in possession of material non-public information, and modifies portions of the interpretive guidance included in the Staff Accounting Bulletin Series (“Series”) in order to make the relevant interpretive guidance consistent with current authoritative accounting guidance, specifically, to update the Series to bring existing guidance into conformity with Topic 718.

**DATES:** Effective [Insert date of publication in the Federal Register.]

**FOR FURTHER INFORMATION CONTACT:** Dan Janiak, Professional Accounting Fellow, Office of the Chief Accountant at (202) 551-5300 or Todd E. Hardiman, Associate Chief Accountant, Division of Corporation Finance at (202) 551-3400, Securities and Exchange Commission, 100 F Street, NE, Washington, DC 20549.

**SUPPLEMENTARY INFORMATION:** The statements in staff accounting bulletins are not rules or interpretations of the Commission, nor are they published as bearing the Commission’s official approval. They represent interpretations and practices followed by the Division of Corporation Finance and the Office of the Chief Accountant in administering the disclosure requirements of the federal securities laws.

November 24, 2021

PART 211 — [AMENDED]

Accordingly, Part 211 of Title 17 of the Code of Federal Regulations is amended as follows:

PART 211—INTERPRETATIONS RELATING TO FINANCIAL REPORTING MATTERS

1. The authority citation for 17 CFR 211 continues to read as follows:

**Authority:** 15 U.S.C. 77g, 15 U.S.C. 77s(a), 15 U.S.C. 77aa(25) and (26), 15 U.S.C. 78c(b), 17 CFR 78l(b) and 13(b), 17 CFR 78m(b) and 15 U.S.C. 80a-8, 30(e) 15 U.S.C. 80a-29(e), 15 U.S.C. 80a-30, and 15 U.S.C. 80a-37(a).

2. Amend the table in subpart B by adding an entry for Staff Accounting Bulletin No. 120 at the end of the table to read as follows:

Subpart B—Staff Accounting Bulletins

Subject	Release No.	Date	Fed. Reg. Vol. and page
*****			
Publication of Staff Accounting Bulletin No. 120	SAB120	[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]	[INSERT FEDERAL REGISTER CITATION]

*Note:* The text of Staff Accounting Bulletin No. 120 will not appear in the Code of Federal Regulations.

**Staff Accounting Bulletin No. 120**

This staff accounting bulletin (“SAB”) adds interpretive guidance for public companies to consider when entering into share-based payment transactions while in possession of material non-public information, including share-based payment transactions that are commonly referred to as being “spring-loaded.” Specifically, the staff is updating the Series to provide additional guidance to companies estimating the fair value of share-based payment transactions in accordance with Topic 718 regarding the determination of the current price of the underlying

share and the estimation of the expected volatility of the price of the underlying share for the expected term when the company is in possession of material non-public information.

Additionally, this SAB rescinds portions and conforms portions of the interpretive guidance included in the Series in order to make the relevant staff interpretive guidance consistent with the latest U.S. generally accepted accounting principles (“U.S. GAAP”) as issued by the FASB. Specifically, the staff is updating the Series in order to bring existing guidance into conformity with Topic 718. The FASB has undertaken various projects to update share-based payment accounting in Topic 718 including, but not limited to, issuing:

- Accounting Standards Update (“ASU”) 2019-08, *Compensation—Stock Compensation (Topic 718) and Revenue from Contracts with Customers (Topic 606): Codification Improvements—Share-Based Consideration Payable to a Customer*, in November 2019;
- ASU 2018-07, *Compensation—Stock Compensation (Topic 718): Improvements to Nonemployee Share-Based Payment Accounting* (“ASU 2018-07”), in June 2018; and
- ASU 2016-09, *Compensation—Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting* (“ASU 2016-09”), in March 2016.

The rescissions and conforming changes bring existing guidance into conformity with Topic 718, as updated by these ASUs.

The following describes the additional interpretive guidance, rescissions, and conforming edits made to the Series that are presented at the end of this release:

## **1. Topic 14: Share-Based Payment**

Topic 14 includes Securities and Exchange Commission staff views on a variety of share-based payment topics. This SAB makes the following updates to Topic 14:

- a. Amendment and replacement of Topic 14.D: *Certain Assumptions Used in Valuation Methods*. The staff has observed numerous instances where companies have granted share-based compensation while in possession of positive material non-public information, including share-based payment transactions that are commonly referred to as being “spring-loaded.” When companies are in possession of positive material non-public information, the staff believes these companies should consider whether adjustments to the current price of the underlying share or the expected volatility of the price of the underlying share for the expected term of the share-based payment award are appropriate when applying a fair-value-based measurement method to estimate the cost of its share-based payment transactions. The staff is including examples where such adjustments may be necessary and is reminding companies of their corporate governance obligations and disclosure obligations under U.S. GAAP with respect to share-based payment transactions, as well as the need to maintain effective internal control over financial reporting.
- b. Rescission of Subtopic 14.A: *Share-Based Payment Transactions with Nonemployees*. The interpretive guidance included in this Subtopic addresses if share-based payment transactions with nonemployees are included in the scope of ASC 718. Because the amendments in ASU 2018-07 expand the scope of ASC 718 to include accounting for share-based payment transactions with nonemployees and supersede the guidance in FASB ASC Subtopic 505-50, *Equity: Equity-Based Payments to Non-Employees* (“ASC 505-50”), Topic 14.A is no longer relevant.
- c. Conforming edits to Subtopics 14.B: *Transition from Nonpublic to Public Entity Status*; 14.C: *Valuation Methods*; 14.D: *Certain Assumptions Used in Valuation Methods*; 14.E: *FASB ASC Topic 718, Compensation – Stock Compensation, and Certain Redeemable Financial Instruments*; 14.F: *Classification of Compensation Expense Associated with Share-Based Payment Arrangements*; and 14.I: *Capitalization of*

*Compensation Cost Related to Share-Based Payment Arrangements*. Recent FASB ASUs 2018-07 and 2016-09 updated terminology used in ASC 718. Because the aforementioned Subtopics in Topic 14 directly or indirectly reference ASC 718, conforming updates are necessary to reflect the most updated U.S. GAAP terminology.

## **2. Topic 5: Miscellaneous Accounting**

Subtopic 5.T: *Accounting for Expenses or Liabilities Paid by Principal Stockholder(s)* is updated to make conforming edits as a result of amendments in ASU 2018-07. Subtopic 5.T references ASC 718-10-15-4 and ASU 2018-07 updated the terminology used in this paragraph to include awards to both employees and nonemployees. The conforming updates are necessary to reflect the most updated U.S. GAAP terminology.

Accordingly, the staff hereby amends the Staff Accounting Bulletin Series as follows:

\*\*\*\*\*

## **TOPIC 14: SHARE-BASED PAYMENT**

\*\*\*\*\*

The interpretations in this SAB express views of the staff regarding the interaction between FASB ASC Topic 718, Compensation — Stock Compensation, and certain SEC rules and regulations and provide the staff's views regarding the valuation of share-based payment arrangements for public companies. FASB ASC Topic 718 is based on the underlying accounting principle that compensation cost resulting from share-based payment transactions be recognized in financial statements at fair value.<sup>1</sup> Recognition of compensation cost at fair value will provide investors and other users of financial statements with more complete and comparable financial information.

---

<sup>1</sup> FASB ASC paragraphs 718-10-30-2 through 718-10-30-4.

FASB ASC Topic 718 addresses a wide range of share-based compensation arrangements including share options, restricted share plans, performance-based awards, share appreciation rights, and employee share purchase plans.

FASB ASC Topic 718 replaced guidance originally issued in 1995 that established as preferable, but did not require, a fair-value-based method of accounting for share-based payment transactions with employees. It also replaced guidance originally issued in 1996 that provided different recognition and measurement requirements for share-based payment awards granted to nonemployees than for those granted to employees.

The staff believes the guidance in this SAB will assist issuers in their application of FASB ASC Topic 718 and enhance the information received by investors and other users of financial statements, thereby assisting them in making investment and other decisions. This SAB includes interpretive guidance related to the transition from nonpublic to public entity<sup>2</sup> status, valuation methods (including assumptions such as expected volatility, expected term, and current price of the underlying share, particularly when valuing spring-loaded awards<sup>3</sup>), the accounting for certain redeemable financial instruments issued under share-based payment arrangements, the classification of compensation expense, and capitalization of compensation cost related to share-based payment arrangements.

The staff recognizes that there is a range of conduct that a reasonable issuer might use to make estimates and valuations and otherwise apply FASB ASC Topic 718, and the interpretive guidance provided by this SAB. Thus, throughout this SAB the use of the terms “reasonable” and “reasonably” is not meant to imply a single conclusion or methodology, but to encompass

---

<sup>2</sup> Defined in the FASB ASC Master Glossary.

<sup>3</sup> A share-based payment award granted when a company is in possession of material nonpublic information to which the market is likely to react positively when the information is announced is sometimes referred to as being “spring-loaded.” The interpretive guidance included in this SAB with respect to spring-loaded share-based payment awards is not limited to share options, and applies to all instruments including, for example, restricted stock units.

the full range of potential conduct, conclusions or methodologies upon which an issuer may reasonably base its valuation decisions. Different conduct, conclusions or methodologies by different issuers in a given situation does not of itself raise an inference that any of those issuers is acting unreasonably. While the zone of reasonable conduct is not unlimited, the staff expects that it will be rare, except when observable market prices of identical or similar equity or liability instruments in active markets are available, when there is only one acceptable choice in estimating the fair value of share-based payment arrangements under the provisions of FASB ASC Topic 718 and the interpretive guidance provided by this SAB in any given situation. In addition, as discussed in the Interpretive Response to Question 1 of Section C, Valuation Methods, estimates of fair value are not intended to predict actual future events, and subsequent events are not indicative of the reasonableness of the original estimates of fair value made under FASB ASC Topic 718.

\*\*\*\*\*

#### **A. Removed by SAB 120**

#### **B. Transition from Nonpublic to Public Entity Status**

**Facts:** Company A is a nonpublic entity<sup>4</sup> that first files a registration statement with the SEC to register its equity securities for sale in a public market on January 2, 20X8. As a nonpublic entity, Company A had been assigning value to its share options<sup>5</sup> under the calculated value method prescribed by FASB ASC Topic 718, Compensation — Stock Compensation,<sup>6</sup> and had

---

<sup>4</sup> Defined in the FASB ASC Master Glossary.

<sup>5</sup> For purposes of this staff accounting bulletin, the phrase “share options” is used to refer to “share options or similar instruments.”

<sup>6</sup> FASB ASC paragraph 718-10-30-20 requires a nonpublic entity to use the calculated value method when it is not able to reasonably estimate the fair value of its equity share options and similar instruments because it is not practicable for it to estimate the expected volatility of its share price. FASB ASC paragraph 718-10-55-51 indicates that a nonpublic entity may be able to identify similar public entities for which share or option price information is available and may consider the historical, expected, or implied volatility of those entities’ share prices in estimating expected volatility. The staff would expect an entity that becomes a public entity and had previously measured its

elected to measure its liability awards based on intrinsic value. Company A is considered a public entity on January 2, 20X8 when it makes its initial filing with the SEC in preparation for the sale of its shares in a public market.

**Question 1:** How should Company A account for the share options that were granted prior to January 2, 20X8 for which the requisite service has not been rendered by January 2, 20X8?

**Interpretive Response:** Prior to becoming a public entity, Company A had been assigning value to its share options under the calculated value method. The staff believes that Company A should continue to follow that approach for those share options that were granted prior to January 2, 20X8, unless those share options are subsequently modified, repurchased or cancelled.<sup>7</sup> If the share options are subsequently modified, repurchased or cancelled, Company A would assess the event under the public company provisions of FASB ASC Topic 718. For example, if Company A modified the share options on February 1, 20X8, any incremental compensation cost would be measured under FASB ASC subparagraph 718-20-35-3(a), as the fair value of the modified share options over the fair value of the original share options measured immediately before the terms were modified.<sup>8</sup>

**Question 2:** How should Company A account for its liability awards granted prior to January 2, 20X8 that are fully vested but have not been settled by January 2, 20X8?

**Interpretive Response:** As a nonpublic entity, Company A had elected to measure its liability awards subject to FASB ASC Topic 718 at intrinsic value.<sup>9</sup> When Company A becomes a public entity, it should measure the liability awards at their fair value determined in accordance with

---

share options under the calculated value method to be able to support its previous decision to use calculated value and to provide the disclosures required by FASB ASC subparagraph 718-10-50-2(f)(2)(ii).

<sup>7</sup> This view is consistent with the FASB's basis for rejecting full retrospective application of FASB ASC Topic 718 as described in the basis for conclusions of Statement 123R, paragraph B251.

<sup>8</sup> FASB ASC paragraph 718-20-55-94. The staff believes that because Company A is a public entity as of the date of the modification, it would be inappropriate to use the calculated value method to measure the original share options immediately before the terms were modified.

<sup>9</sup> FASB ASC paragraph 718-30-30-2.



FASB ASC Topic 718.<sup>10</sup> In that reporting period there will be an incremental amount of measured cost for the difference between fair value as determined under FASB ASC Topic 718 and intrinsic value. For example, assume the intrinsic value in the period ended December 31, 20X7 was \$10 per award. At the end of the first reporting period ending after January 2, 20X8 (when Company A becomes a public entity), assume the intrinsic value of the award is \$12 and the fair value as determined in accordance with FASB ASC Topic 718 is \$15. The measured cost in the first reporting period after December 31, 20X7 would be \$5.<sup>11</sup>

**Question 3:** After becoming a public entity, may Company A retrospectively apply the fair-value-based method to its awards that were granted prior to the date Company A became a public entity?

**Interpretive Response:** No. Before becoming a public entity, Company A did not use the fair-value-based method for either its share options or its liability awards. The staff does not believe it is appropriate for Company A to apply the fair-value-based method on a retrospective basis, because it would require the entity to make estimates of a prior period, which, due to hindsight, may vary significantly from estimates that would have been made contemporaneously in prior periods.<sup>12</sup>

**Question 4:** Upon becoming a public entity, what disclosures should Company A consider in addition to those prescribed by FASB ASC Topic 718?<sup>13</sup>

**Interpretive Response:** In the registration statement filed on January 2, 20X8, Company A should clearly describe in MD&A the change in accounting policy that will be required by FASB ASC Topic 718 in subsequent periods and the reasonably likely material future effects.<sup>14</sup> In

---

<sup>10</sup> FASB ASC paragraph 718-30-35-3.

<sup>11</sup> \$15 fair value less \$10 intrinsic value equals \$5 of incremental cost.

<sup>12</sup> This view is consistent with the FASB's basis for rejecting full retrospective application of FASB ASC Topic 718 as described in the basis for conclusions of Statement 123R, paragraph B251.

<sup>13</sup> FASB ASC Section 718-10-50.

<sup>14</sup> See Item 303 of Regulation S-K.

subsequent filings, Company A should provide financial statement disclosure of the effects of the changes in accounting policy. In addition, Company A should consider the requirements of Item 303(b)(3) of Regulation S-K regarding critical accounting estimates in MD&A.

### **C. Valuation Methods**

FASB ASC paragraph 718-10-30-6 (Compensation — Stock Compensation Topic) indicates that the measurement objective for equity instruments awarded to grantees is to estimate at the grant date the fair value of the equity instruments the entity is obligated to issue when grantees have delivered the good or rendered the service and satisfied any other conditions necessary to earn the right to benefit from the instruments.<sup>15</sup> The Topic also states that observable market prices of identical or similar equity or liability instruments in active markets are the best evidence of fair value and, if available, should be used as the basis for the measurement for equity and liability instruments awarded in a share-based payment transaction.<sup>16</sup> However, if observable market prices of identical or similar equity or liability instruments are not available, the fair value shall be estimated by using a valuation technique or model that complies with the measurement objective, as described in FASB ASC Topic 718.<sup>17</sup>

**Question 1:** If a valuation technique or model is used to estimate fair value, to what extent will the staff consider a company's estimates of fair value to be materially misleading because the estimates of fair value do not correspond to the value ultimately realized by the grantees who received the share options?

**Interpretive Response:** The staff understands that estimates of fair value of share options, while derived from expected value calculations, cannot predict actual future events.<sup>18</sup> The estimate of

---

<sup>15</sup> FASB ASC paragraph 718-10-30-1 states that this guidance applies equally to awards classified as liabilities.

<sup>16</sup> FASB ASC paragraph 718-10-55-10.

<sup>17</sup> FASB ASC paragraph 718-10-55-11.

<sup>18</sup> FASB ASC paragraph 718-10-55-15 states, "The fair value of those instruments at a single point in time is not a forecast of what the estimated fair value of those instruments may be in the future."

fair value represents the measurement of the cost of the grantee's goods or services to the company. The estimate of fair value should reflect the assumptions marketplace participants would use in determining how much to pay for an instrument on the fair value measurement date.<sup>19</sup> For example, valuation techniques used in estimating the fair value of share options may consider information about a large number of possible share price paths, while, of course, only one share price path will ultimately emerge. If a company makes a good faith fair value estimate in accordance with the provisions of FASB ASC Topic 718 in a way that is designed to take into account the assumptions that underlie the instrument's value that marketplace participants would reasonably make, then subsequent future events that affect the instrument's value do not provide meaningful information about the quality of the original fair value estimate. As long as the share options were originally so measured, changes in a share option's value, no matter how significant, subsequent to its grant date do not call into question the reasonableness of the grant date fair value estimate.

**Question 2:** In order to meet the fair value measurement objective in FASB ASC Topic 718, are certain valuation techniques preferred over others?

**Interpretive Response:** FASB ASC paragraph 718-10-55-17 clarifies that the Topic does not specify a preference for a particular valuation technique or model. As stated in FASB ASC paragraph 718-10-55-11 in order to meet the fair value measurement objective, a company should select a valuation technique or model that (a) is applied in a manner consistent with the fair value measurement objective and other requirements of FASB ASC Topic 718, (b) is based on established principles of financial economic theory and generally applied in that field and (c) reflects all substantive characteristics of the instrument (except for those explicitly excluded by FASB ASC Topic 718).

---

<sup>19</sup> Generally, the grant date for equity awards or the reporting date for liability-classified awards.

The chosen valuation technique or model must meet all three of the requirements stated above. In valuing a particular instrument, certain techniques or models may meet the first and second criteria but may not meet the third criterion because the techniques or models are not designed to reflect certain characteristics contained in the instrument. For example, for a share option in which the exercisability is conditional on a specified increase in the price of the underlying shares, the Black-Scholes-Merton closed-form model would not generally be an appropriate valuation model because, while it meets both the first and second criteria, it is not designed to take into account that type of market condition.<sup>20</sup>

Further, the staff understands that a company may consider multiple techniques or models that meet the fair value measurement objective before making its selection as to the appropriate technique or model. The staff would not object to a company's choice of a technique or model as long as the technique or model meets the fair value measurement objective. For example, a company is not required to use a lattice model simply because that model was the most complex of the models the company considered.

**Question 3:** In subsequent periods, may a company change the valuation technique or model chosen to value instruments with similar characteristics?<sup>21</sup>

**Interpretive Response:** As long as the new technique or model meets the fair value measurement objective as described in Question 2 above, the staff would not object to a company changing its valuation technique or model.<sup>22</sup> A change in the valuation technique or model used to meet the fair value measurement objective would not be considered a change in

---

<sup>20</sup> See FASB ASC paragraphs 718-10-55-16 and 718-10-55-20.

<sup>21</sup> FASB ASC paragraph 718-10-55-17 indicates that an entity may use different valuation techniques or models for instruments with different characteristics.

<sup>22</sup> The staff believes that a company should take into account the reason for the change in technique or model in determining whether the new technique or model meets the fair value measurement objective. For example, changing a technique or model from period to period for the sole purpose of lowering the fair value estimate of a share option would not meet the fair value measurement objective of the Topic.

accounting principle.<sup>23</sup> As such, a company would not be required to file a preferability letter from its independent accountants as described in Rule 10-01(b)(6) of Regulation S-X when it changes valuation techniques or models. However, the staff would not expect that a company would frequently switch between valuation techniques or models, particularly in circumstances where there was no significant variation in the form of share-based payments being valued. Disclosure in the footnotes of the basis for any change in technique or model would be appropriate.<sup>24</sup>

**Question 4:** Must every company that issues share options or similar instruments hire an outside third party to assist in determining the fair value of the share options?

**Interpretive Response:** No. However, the valuation of a company's share options or similar instruments should be performed by a person with the requisite expertise.

#### **D. Certain Assumptions Used in Valuation Methods**

FASB ASC Topic 718's (Compensation — Stock Compensation Topic) fair value measurement objective for equity instruments awarded to grantees for goods or services is to estimate the grant-date fair value of the equity instruments that the entity is obligated to issue when grantees have delivered the good or rendered the service and satisfied any other conditions necessary to earn the right to benefit from the instruments.<sup>25</sup> In order to meet this fair value measurement objective, management will generally be required to develop estimates regarding (1) the expected volatility of its company's share price; (2) the expected term of the option, taking into account both the contractual term of the option and the effects of grantees' expected exercise and post-vesting termination behavior; and (3) the determination of the current price of the

---

<sup>23</sup> FASB ASC paragraph 718-10-55-27.

<sup>24</sup> See generally FASB ASC paragraph 718-10-50-1.

<sup>25</sup> FASB ASC paragraph 718-10-30-6. FASB ASC paragraph 718-10-30-1 states that this guidance applies equally to awards classified as liabilities.

underlying share. The staff is providing guidance in the following sections related to the expected volatility, expected term and current share price assumptions to assist public entities in applying those requirements.

## **1. Expected Volatility**

FASB ASC paragraph 718-10-55-36 states, “Volatility is a measure of the amount by which a financial variable, such as share price, has fluctuated (historical volatility) or is expected to fluctuate (expected volatility) during a period. Option-pricing models require an estimate of expected volatility as an assumption because an option’s value is dependent on potential share returns over the option’s term. The higher the volatility, the more the returns on the share can be expected to vary — up or down. Because an option’s value is unaffected by expected negative returns on the shares, other things [being] equal, an option on a share with higher volatility is worth more than an option on a share with lower volatility.”

**Facts:** Company B is a public entity whose common shares have been publicly traded for over twenty years. Company B also has multiple options on its shares outstanding that are traded on an exchange (“traded options”). Company B grants share options on January 2, 20X6.

**Question 1:** What should Company B consider when estimating expected volatility for purposes of measuring the fair value of its share options?

**Interpretive Response:** FASB ASC Topic 718 does not specify a particular method of estimating expected volatility. However, the Topic does clarify that the objective in estimating expected volatility is to ascertain the assumption about expected volatility that marketplace participants would likely use in determining an exchange price for an option.<sup>26</sup> FASB ASC Topic 718 provides a list of factors entities should consider in estimating expected

---

<sup>26</sup> FASB ASC paragraph 718-10-55-35.

volatility.<sup>27</sup> Company B may begin its process of estimating expected volatility by considering its historical volatility.<sup>28</sup> However, Company B should also then consider, based on available information, how the expected volatility of its share price may differ from historical volatility.<sup>29</sup> Implied volatility<sup>30</sup> can be useful in estimating expected volatility because it is generally reflective of both historical volatility and expectations of how future volatility will differ from historical volatility.

The staff believes that companies should make good faith efforts to identify and use sufficient information in determining whether taking historical volatility, implied volatility or a combination of both into account will result in the best estimate of expected volatility. The staff believes companies that have appropriate traded financial instruments from which they can derive an implied volatility should generally consider this measure. The extent of the ultimate reliance on implied volatility will depend on a company's facts and circumstances; however, the staff believes that a company with actively traded options or other financial instruments with embedded options<sup>31</sup> generally could place greater (or even exclusive) reliance on implied volatility. (*See the Interpretive Responses to Questions 3 and 4 below.*)

The process used to gather and review available information to estimate expected volatility should be applied consistently from period to period. When circumstances indicate the

---

<sup>27</sup> FASB ASC paragraph 718-10-55-37.

<sup>28</sup> FASB ASC paragraph 718-10-55-40.

<sup>29</sup> *Ibid.*

<sup>30</sup> Implied volatility is the volatility assumption inherent in the market prices of a company's traded options or other financial instruments that have option-like features. Implied volatility is derived by entering the market price of the traded financial instrument, along with assumptions specific to the financial options being valued, into a model based on a constant volatility estimate (*e.g.*, the Black-Scholes-Merton closed-form model) and solving for the unknown assumption of volatility.

<sup>31</sup> The staff believes implied volatility derived from embedded options can be utilized in determining expected volatility if, in deriving the implied volatility, the company considers all relevant features of the instruments (*e.g.*, value of the host instrument, value of the option, etc.). The staff believes the derivation of implied volatility from other than simple instruments (*e.g.*, a simple convertible bond) can, in some cases, be impracticable due to the complexity of multiple features.

availability of new or different information that would be useful in estimating expected volatility, a company should incorporate that information.

**Question 2:** What should Company B consider if computing historical volatility?<sup>32</sup>

**Interpretive Response:** The following should be considered in the computation of historical volatility:

#### 1. Method of Computing Historical Volatility —

The staff believes the method selected by Company B to compute its historical volatility should produce an estimate that is representative of a marketplace participant's expectations about Company B's future volatility over the expected (if using a Black-Scholes-Merton closed-form model) or contractual (if using a lattice model) term<sup>33</sup> of its share options. Certain methods may not be appropriate for longer term share options if they weight the most recent periods of Company B's historical volatility much more heavily than earlier periods.<sup>34</sup> For example, a method that applies a factor to certain historical price intervals to reflect a decay or loss of relevance of that historical information emphasizes the most recent historical periods and thus would likely bias the estimate to this recent history.<sup>35</sup>

#### 2. Amount of Historical Data —

FASB ASC subparagraph 718-10-55-37(a) indicates entities should consider historical volatility over a period generally commensurate with the expected or contractual term, as applicable, of the

---

<sup>32</sup> See FASB ASC paragraph 718-10-55-37.

<sup>33</sup> For purposes of this staff accounting bulletin, the phrase "expected or contractual term, as applicable" has the same meaning as the phrase "expected (if using a Black-Scholes-Merton closed-form model) or contractual (if using a lattice model) term of a share option."

<sup>34</sup> FASB ASC subparagraph 718-10-55-37(a) states that entities should consider historical volatility over a period generally commensurate with the expected or contractual term, as applicable, of the share option. Accordingly, the staff believes methods that place extreme emphasis on the most recent periods may be inconsistent with this guidance.

<sup>35</sup> Generalized Autoregressive Conditional Heteroskedasticity ("GARCH") is an example of a method that demonstrates this characteristic.



share option. The staff believes Company B could utilize a period of historical data longer than the expected or contractual term, as applicable, if it reasonably believes the additional historical information will improve the estimate. For example, assume Company B decided to utilize a Black-Scholes-Merton closed-form model to estimate the value of the share options granted on January 2, 20X6 and determined that the expected term was six years. Company B would not be precluded from using historical data longer than six years if it concludes that data would be relevant.

### 3. Frequency of Price Observations —

FASB ASC subparagraph 718-10-55-37(d) indicates an entity should use appropriate and regular intervals for price observations based on facts and circumstances that provide the basis for a reasonable fair value estimate. Accordingly, the staff believes Company B should consider the frequency of the trading of its shares and the length of its trading history in determining the appropriate frequency of price observations. The staff believes using daily, weekly or monthly price observations may provide a sufficient basis to estimate expected volatility if the history provides enough data points on which to base the estimate.<sup>36</sup> Company B should select a consistent point in time within each interval when selecting data points.<sup>37</sup>

### 4. Consideration of Future Events —

The objective in estimating expected volatility is to ascertain the assumptions that marketplace participants would likely use in determining an exchange price for an option.<sup>38</sup> Accordingly, the

---

<sup>36</sup> Further, if shares of a company are thinly traded the staff believes the use of weekly or monthly price observations would generally be more appropriate than the use of daily price observations. The volatility calculation using daily observations for such shares could be artificially inflated due to a larger spread between the bid and asked quotes and lack of consistent trading in the market.

<sup>37</sup> FASB ASC paragraph 718-10-55-40 states that a company should establish a process for estimating expected volatility and apply that process consistently from period to period. In addition, FASB ASC paragraph 718-10-55-27 indicates that assumptions used to estimate the fair value of instruments granted in share-based payment transactions should be determined in a consistent manner from period to period.

<sup>38</sup> FASB ASC paragraph 718-10-55-35.

staff believes that Company B should consider those future events that it reasonably concludes a marketplace participant would also consider in making the estimation. For example, if Company B has recently announced a merger with a company that would change its business risk in the future, then it should consider the impact of the merger in estimating the expected volatility if it reasonably believes a marketplace participant would also consider this event.

The staff believes that careful consideration is required to determine whether material non-public information is currently available (or would be available) to the issuer that would be considered by a marketplace participant in estimating the expected volatility.<sup>39</sup> For example, if Company B has entered into a material transaction that has not yet been announced prior to its grant of equity instruments, the specific facts and circumstances of the material transaction may lead Company B to conclude that the impact of this event should be included in estimating the expected volatility when determining the grant-date fair value of those equity instruments.

## 5. Exclusion of Periods of Historical Data —

In some instances, due to a company's particular business situations, a period of historical volatility data may not be relevant in evaluating expected volatility.<sup>40</sup> In these instances, that period should be disregarded. The staff believes that if Company B disregards a period of historical volatility, it should be prepared to support its conclusion that its historical share price during that previous period is not relevant to estimating expected volatility due to one or more discrete and specific historical events and that similar events are not expected to occur during the expected term of the share option. The staff believes these situations would be rare.

---

<sup>39</sup> FASB ASC paragraph 718-10-55-13 states "assumptions shall reflect information that is (or would be) available to form the basis for an amount at which the instruments being valued would be exchanged. In estimating fair value, the assumptions used shall not represent the biases of a particular party."

<sup>40</sup> FASB ASC paragraph 718-10-55-37.

**Question 3:** What should Company B consider when evaluating the extent of its reliance on the implied volatility derived from its traded options?

**Interpretive Response:** To achieve the objective of estimating expected volatility as stated in FASB ASC paragraphs 718-10-55-35 through 718-10-55-41, the staff believes Company B generally should consider the following in its evaluation: 1) the volume of market activity of the underlying shares and traded options; 2) the ability to synchronize the variables used to derive implied volatility; 3) the similarity of the exercise prices of the traded options to the exercise price of the newly-granted share options; 4) the similarity of the length of the term of the traded and newly-granted share options;<sup>41</sup> and 5) consideration of material non-public information.

1. Volume of Market Activity —

The staff believes Company B should consider the volume of trading in its underlying shares as well as the traded options. For example, prices for instruments in actively traded markets are more likely to reflect a marketplace participant's expectations regarding expected volatility.

2. Synchronization of the Variables —

Company B should synchronize the variables used to derive implied volatility. For example, to the extent reasonably practicable, Company B should use market prices (either traded prices or the average of bid and asked quotes) of the traded options and its shares measured at the same point in time. This measurement should also be synchronized with the grant of the share options; however, when this is not reasonably practicable, the staff believes Company B should derive implied volatility as of a point in time as close to the grant of the share options as reasonably practicable.

---

<sup>41</sup> See *generally* Options, Futures, and Other Derivatives by John C. Hull (Pearson, 11th Edition, 2021).

### 3. Similarity of the Exercise Prices —

The staff believes that when valuing an at-the-money share option, the implied volatility derived from at- or near-the-money traded options generally would be most relevant.<sup>42</sup> If, however, it is not possible to find at- or near-the-money traded options, Company B should select multiple traded options with an average exercise price close to the exercise price of the share option.<sup>43</sup>

### 4. Similarity of Length of Terms —

The staff believes that when valuing a share option with a given expected or contractual term, as applicable, the implied volatility derived from a traded option with a similar term would be the most relevant. However, if there are no traded options with maturities that are similar to the share option's contractual or expected term, as applicable, then the staff believes Company B could consider traded options with a remaining maturity of six months or greater.<sup>44</sup> However, when using traded options with a term of less than one year,<sup>45</sup> the staff would expect the company to also consider other relevant information in estimating expected volatility. In general, the staff believes more reliance on the implied volatility derived from a traded option would be expected

---

<sup>42</sup> Implied volatilities of options differ systematically over the “moneyness” of the option. This pattern of implied volatilities across exercise prices is known as the “volatility smile” or “volatility skew.” Studies such as “Implied Volatility” by Stewart Mayhew, *Financial Analysts Journal*, July-August 1995, as well as more recent studies, have found that implied volatilities based on near-the-money options do as well as sophisticated weighted implied volatilities in estimating expected volatility. In addition, the staff believes that because near-the-money options are generally more actively traded, they may provide a better basis for deriving implied volatility.

<sup>43</sup> The staff believes a company could use a weighted-average implied volatility based on traded options that are either in-the-money or out-of-the-money. For example, if the share option has an exercise price of \$52, but the only traded options available have exercise prices of \$50 and \$55, then the staff believes that it is appropriate to use a weighted average based on the implied volatilities from the two traded options; for this example, a 40% weight on the implied volatility calculated from the option with an exercise price of \$55 and a 60% weight on the option with an exercise price of \$50.

<sup>44</sup> The staff believes it may also be appropriate to consider the entire term structure of volatility provided by traded options with a variety of remaining maturities. If a company considers the entire term structure in deriving implied volatility, the staff would expect a company to include some options in the term structure with a remaining maturity of six months or greater.

<sup>45</sup> The staff believes the implied volatility derived from a traded option with a term of one year or greater would typically not be significantly different from the implied volatility that would be derived from a traded option with a significantly longer term.

the closer the remaining term of the traded option is to the expected or contractual term, as applicable, of the share option.

#### 5. Consideration of Material Nonpublic Information —

When a company is in possession of material non-public information, the staff believes that the related guidance in the interpretive response to Question 2 above would also be relevant in determining whether the implied volatility appropriately reflects a marketplace participant's expectations of future volatility.

The staff believes Company B's evaluation of the factors above should assist in determining whether the implied volatility appropriately reflects the market's expectations of future volatility and thus the extent of reliance that Company B reasonably places on the implied volatility.

**Question 4:** Are there situations in which it is acceptable for Company B to rely exclusively on either implied volatility or historical volatility in its estimate of expected volatility?

**Interpretive Response:** As stated above, FASB ASC Topic 718 does not specify a method of estimating expected volatility; rather, it provides a list of factors that should be considered and requires that an entity's estimate of expected volatility be reasonable and supportable.<sup>46</sup> Many of the factors listed in FASB ASC Topic 718 are discussed in Questions 2 and 3 above. The objective of estimating volatility, as stated in FASB ASC Topic 718, is to ascertain the assumption about expected volatility that marketplace participants would likely use in determining an exchange price for an option.<sup>47</sup> The staff believes that a company, after considering the factors listed in FASB ASC Topic 718, could, in certain situations, reasonably

---

<sup>46</sup> FASB ASC paragraphs 718-10-55-36 through 718-10-55-37.

<sup>47</sup> FASB ASC paragraph 718-10-55-35.

conclude that exclusive reliance on either historical or implied volatility would provide an estimate of expected volatility that meets this stated objective.

The staff would not object to Company B placing exclusive reliance on implied volatility when the following factors are present, as long as the methodology is consistently applied:

- Company B utilizes a valuation model that is based upon a constant volatility assumption to value its share options;<sup>48</sup>
- The implied volatility is derived from options that are actively traded;
- The market prices (trades or quotes) of both the traded options and underlying shares are measured at a similar point in time to each other and on a date reasonably close to the fair value measurement date of the share options;
- The traded options have exercise prices that are both (a) near-the-money and (b) close to the exercise price of the share options;<sup>49</sup>
- The remaining maturities of the traded options on which the estimate is based are at least one year, and
- Material nonpublic information that would be considered in a marketplace participant's expectation of future volatility does not exist.

---

<sup>48</sup> FASB ASC paragraphs 718-10-55-18 and 718-10-55-39 discuss the incorporation of a range of expected volatilities into option pricing models. The staff believes that a company that utilizes an option pricing model that incorporates a range of expected volatilities over the option's contractual term should consider the factors listed in FASB ASC Topic 718, and those discussed in the Interpretive Responses to Questions 2 and 3 above, to determine the extent of its reliance (including exclusive reliance) on the derived implied volatility.

<sup>49</sup> When near-the-money options are not available, the staff believes the use of a weighted-average approach, as noted previously, may be appropriate.

The staff would not object to Company B placing exclusive reliance on historical volatility when the following factors are present, so long as the methodology is consistently applied:

- Company B has no reason to believe that its future volatility over the expected or contractual term, as applicable, is likely to differ from its past;<sup>50</sup>
- The computation of historical volatility uses a simple average calculation method;
- A sequential period of historical data at least equal to the expected or contractual term of the share option, as applicable, is used; and
- A reasonably sufficient number of price observations are used, measured at a consistent point throughout the applicable historical period.<sup>51</sup>

**Question 5:** What disclosures would the staff expect Company B to include in its financial statements and MD&A regarding its assumption of expected volatility?

**Interpretive Response:** FASB ASC paragraph 718-10-50-2 prescribes the minimum information needed to achieve the Topic's disclosure objectives.<sup>52</sup> Under that guidance, Company B is required to disclose the expected volatility and the method used to estimate it.<sup>53</sup> Accordingly, the staff expects that, at a minimum, Company B would disclose in a footnote to its financial statements how it determined the expected volatility assumption for purposes of determining the fair value of its share options in accordance with FASB ASC Topic 718. For

---

<sup>50</sup> See FASB ASC paragraph 718-10-55-38. A change in a company's business model that results in a material alteration to the company's risk profile is an example of a circumstance in which the company's future volatility would be expected to differ from its historical volatility. Other examples may include, but are not limited to, the introduction of a new product that is central to a company's business model or the receipt of U.S. Food and Drug Administration approval for the sale of a new prescription drug.

<sup>51</sup> If the expected or contractual term, as applicable, of the employee share option is less than three years, the staff believes monthly price observations would not provide a sufficient amount of data.

<sup>52</sup> FASB ASC paragraph 718-10-50-1.

<sup>53</sup> FASB ASC subparagraph 718-10-50-2(f) (2) (ii).

example, at a minimum, the staff would expect Company B to disclose whether it used only implied volatility, historical volatility, or a combination of both, and how it determined any significant adjustments to historical volatility.

In addition, Company B should consider the requirements of Regulation S-K Item 303(b)(3) regarding critical accounting estimates in MD&A. A company should determine whether its evaluation of any of the factors listed in Questions 2 and 3 of this section, such as consideration of future events in estimating expected volatility, resulted in an estimate that involves a significant level of estimation uncertainty and has had or is reasonably likely to have a material impact on the financial condition or results of operations of the company.

**Facts:** Company C is a newly public entity with limited historical data on the price of its publicly-traded shares and no other traded financial instruments. Company C believes that it does not have sufficient company-specific information regarding the volatility of its share price on which to base an estimate of expected volatility.

**Question 6:** What other sources of information should Company C consider in order to estimate the expected volatility of its share price?

**Interpretive Response:** FASB ASC Topic 718 provides guidance on estimating expected volatility for newly-public and nonpublic entities that do not have company-specific historical or implied volatility information available.<sup>54</sup> Company C may base its estimate of expected volatility on the historical, expected or implied volatility of similar entities whose share or option prices are publicly available. In making its determination as to similarity, Company C would likely consider the industry, stage of life cycle, size and financial leverage of such other entities.<sup>55</sup>

---

<sup>54</sup> FASB ASC paragraphs 718-10-55-25 and 718-10-55-51.

<sup>55</sup> FASB ASC paragraph 718-10-55-25.



The staff would not object to Company C looking to an industry sector index (*e.g.*, NASDAQ Computer Index) that is representative of Company C's industry, and possibly its size, to identify one or more similar entities.<sup>56</sup> Once Company C has identified similar entities, it would substitute a measure of the individual volatilities of the similar entities for the expected volatility of its share price as an assumption in its valuation model.<sup>57</sup> Because of the effects of diversification that are present in an industry sector index, Company C should not substitute the volatility of an index for the expected volatility of its share price as an assumption in its valuation model.<sup>58</sup>

After similar entities have been identified, Company C should continue to consider the volatilities of those entities unless circumstances change such that the identified entities are no longer similar to Company C. Until Company C has sufficient information available, the staff would not object to Company C basing its estimate of expected volatility on the volatility of similar entities for those periods for which it does not have sufficient information available.<sup>59</sup> Until Company C has either a sufficient amount of historical information regarding the volatility of its share price or other traded financial instruments are available to derive an implied volatility to support an estimate of expected volatility, it should consistently apply a process as described above to estimate expected volatility based on the volatilities of similar entities.<sup>60</sup>

---

<sup>56</sup> If a company operates in a number of different industries, it could look to several industry indices. However, when considering the volatilities of multiple companies, each operating only in a single industry, the staff believes a company should take into account its own leverage, the leverages of each of the entities, and the correlation of the entities' stock returns.

<sup>57</sup> FASB ASC paragraph 718-10-55-51.

<sup>58</sup> FASB ASC paragraph 718-10-55-25.

<sup>59</sup> FASB ASC paragraph 718-10-55-37. The staff believes that at least two years of daily or weekly historical data could provide a reasonable basis on which to base an estimate of expected volatility if a company has no reason to believe that its future volatility will differ materially during the expected or contractual term, as applicable, from the volatility calculated from this past information. If the expected or contractual term, as applicable, of a share option is shorter than two years, the staff believes a company should use daily or weekly historical data for at least the length of that applicable term.

<sup>60</sup> FASB ASC paragraph 718-10-55-40.

## 2. Expected Term

FASB ASC paragraph 718-10-55-29 states, “The fair value of a traded (or transferable) share option is based on its contractual term because rarely is it economically advantageous to exercise, rather than sell, a transferable share option before the end of its contractual term.

Employee share options generally differ from transferable [or tradable] share options in that employees cannot sell (or hedge) their share options — they can only exercise them; because of this, employees generally exercise their options before the end of the options’ contractual term.

Thus, the inability to sell or hedge an employee share option effectively reduces the option’s value [compared to a transferable option] because exercise prior to the option’s expiration terminates its remaining life and thus its remaining time value.” Accordingly, FASB ASC Topic 718 requires that when valuing an employee share option under the Black-Scholes-Merton framework the fair value of employee share options be based on the share options’ expected term rather than the contractual term.

FASB ASC paragraph 718-10-55-29A states, “On an award-by-award basis, an entity may elect to use the contractual term as the expected term when estimating the fair value of a nonemployee award to satisfy the measurement objective in paragraph 718-10-30-6. Otherwise, an entity shall apply the guidance in [Topic 718] in estimating the expected term of a nonemployee award, which may result in a term less than the contractual term of the award. If an entity does not elect to use the contractual term as the expected term, similar considerations discussed in paragraph 718-10-55-29, such as the inability to sell or hedge a nonemployee award, apply when estimating its expected term.”

The staff believes the estimate of expected term should be based on the facts and circumstances available in each particular case. Consistent with our Topic 14 introductory guidance regarding reasonableness, the fact that other possible estimates are later determined to have more accurately reflected the term does not necessarily mean that the particular choice was

unreasonable. The staff reminds registrants of the expected term disclosure requirements described in FASB ASC subparagraph 718-10-50-2(f)(2)(i).

**Facts:** Company D utilizes the Black-Scholes-Merton closed-form model to value its share options for the purposes of determining the fair value of the options under FASB ASC Topic 718. Company D recently granted share options to its employees. Based on its review of various factors, Company D determines that the expected term of the options is six years, which is less than the contractual term of ten years.

**Question 1:** When determining the fair value of the share options in accordance with FASB ASC Topic 718, should Company D consider an additional discount for nonhedgability and nontransferability?

**Interpretive Response:** No. FASB ASC paragraph 718-10-55-29 indicates that nonhedgability and nontransferability have the effect of increasing the likelihood that an employee share option will be exercised before the end of its contractual term. Nonhedgability and nontransferability therefore factor into the expected term assumption (in this case reducing the term assumption from ten years to six years), and the expected term reasonably adjusts for the effect of these factors. Accordingly, the staff believes that no additional reduction in the term assumption or other discount to the estimated fair value is appropriate for these particular factors.<sup>61</sup>

**Question 2:** Should forfeitures or terms that stem from forfeitability be factored into the determination of expected term?

---

<sup>61</sup> The staff notes the existence of academic literature that supports the assertion that the Black-Scholes-Merton closed-form model, with expected term as an input, can produce reasonable estimates of fair value. Such literature includes J. Carpenter, "The exercise and valuation of executive stock options," *Journal of Financial Economics*, May 1998, pp.127-158; C. Marquardt, "The Cost of Employee Stock Option Grants: An Empirical Analysis," *Journal of Accounting Research*, September 2002, pp. 1191-1217); and J. Bettis, J. Bizjak and M. Lemmon, "Exercise behavior, valuation, and the incentive effect of employee stock options," *Journal of Financial Economics*, May 2005, pp. 445-470, as well as more recent studies,.

**Interpretive Response:** No. FASB ASC Topic 718 indicates that the expected term that is utilized as an assumption in a closed-form option-pricing model or a resulting output of a lattice option pricing model when determining the fair value of the share options should not incorporate restrictions or other terms that stem from the pre-vesting forfeitability of the instruments. Under FASB ASC Topic 718, these pre-vesting restrictions or other terms are taken into account by ultimately recognizing compensation cost only for awards for which grantees deliver the good or render the service.<sup>62</sup>

**Question 3:** Can a company's estimate of expected term ever be shorter than the vesting period?

**Interpretive Response:** No. The vesting period forms the lower bound of the estimate of expected term.<sup>63</sup>

**Question 4:** FASB ASC paragraph 718-10-55-34 indicates that an entity shall aggregate individual awards into relatively homogenous groups with respect to exercise and post-vesting employment termination behaviors for the purpose of determining expected term, regardless of the valuation technique or model used to estimate the fair value. How many groupings are typically considered sufficient?

**Interpretive Response:** As it relates to employee groupings, the staff believes that an entity may generally make a reasonable fair value estimate with as few as one or two groupings.<sup>64</sup>

---

<sup>62</sup> FASB ASC paragraph 718-10-30-11.

<sup>63</sup> FASB ASC paragraph 718-10-55-31.

<sup>64</sup> The staff believes the focus should be on groups of employees with significantly different expected exercise behavior. Academic research suggests two such groups might be executives and non-executives. A study by S. Huddart found executives and other senior managers to be significantly more patient in their exercise behavior than more junior employees. (Employee rank was proxied for by the number of options issued to that employee.) See S. Huddart, "Patterns of stock option exercise in the United States," in: J. Carpenter and D. Yermack, eds., *Executive Compensation and Shareholder Value: Theory and Evidence* (Kluwer, Boston, MA, 1999), pp. 115-142. See also S. Huddart and M. Lang, "Employee stock option exercises: An empirical analysis," *Journal of Accounting and Economics*, 1996, pp. 5-43.

**Question 5:** What approaches could a company use to estimate the expected term of its employee share options?

**Interpretive Response:** A company should use an approach that is reasonable and supportable under FASB ASC Topic 718's fair value measurement objective, which establishes that assumptions and measurement techniques should be consistent with those that marketplace participants would be likely to use in determining an exchange price for the share options.<sup>65</sup> If, in developing its estimate of expected term, a company determines that its historical share option exercise experience is the best estimate of future exercise patterns, the staff will not object to the use of the historical share option exercise experience to estimate expected term.<sup>66</sup>

A company may also conclude that its historical share option exercise experience does not provide a reasonable basis upon which to estimate expected term. This may be the case for a variety of reasons, including, but not limited to, the life of the company and its relative stage of development, past or expected structural changes in the business, differences in terms of past equity-based share option grants,<sup>67</sup> or a lack of variety of price paths that the company may have experienced.<sup>68</sup>

FASB ASC Topic 718 describes other alternative sources of information that might be used in those cases when a company determines that its historical share option exercise experience does not provide a reasonable basis upon which to estimate expected term. For example, a lattice model (which by definition incorporates multiple price paths) can be used to estimate expected

---

<sup>65</sup> FASB ASC paragraph 718-10-55-13.

<sup>66</sup> Historical share option exercise experience encompasses data related to share option exercise, post-vesting termination, and share option contractual term expiration.

<sup>67</sup> For example, if a company had historically granted share options that were always in-the-money, and will grant at-the-money options prospectively, the exercise behavior related to the in-the-money options may not be sufficient as the sole basis to form the estimate of expected term for the at-the-money grants.

<sup>68</sup> For example, if a company had a history of previous equity-based share option grants and exercises only in periods in which the company's share price was rising, the exercise behavior related to those options may not be sufficient as the sole basis to form the estimate of expected term for current option grants.

term as an input into a Black-Scholes-Merton closed-form model.<sup>69</sup> In addition, FASB ASC paragraph 718-10-55-32 states that “...expected term might be estimated in some other manner, taking into account whatever relevant and supportable information is available, including industry averages and other pertinent evidence such as published academic research.” For example, data about exercise patterns of employees in similar industries and/or situations as the company’s might be used.

**Facts:** Company E grants equity share options to its employees that have the following basic characteristics:<sup>70</sup>

- The share options are granted at-the-money;
- Exercisability is conditional only on performing service through the vesting date;<sup>71</sup>
- If an employee terminates service prior to vesting, the employee would forfeit the share options;
- If an employee terminates service after vesting, the employee would have a limited time to exercise the share options (typically 30-90 days); and
- The share options are nontransferable and nonhedgeable.

Company E utilizes the Black-Scholes-Merton closed-form model for valuing its employee share options.

---

<sup>69</sup> FASB ASC paragraph 718-10-55-30.

<sup>70</sup> Employee share options with these features are sometimes referred to as “plain vanilla” options.

<sup>71</sup> In this fact pattern the requisite service period equals the vesting period.

**Question 6:** As share options with these “plain vanilla” characteristics have been granted in significant quantities by many companies in the past, is the staff aware of any “simple” methodologies that can be used to estimate expected term?

**Interpretive Response:** The staff understands that an entity that is unable to rely on its historical exercise data may find that certain alternative information, such as exercise data relating to employees of other companies, is not easily obtainable. As such, some companies may encounter difficulties in making a refined estimate of expected term. Accordingly, if a company concludes that its historical share option exercise experience does not provide a reasonable basis upon which to estimate expected term, the staff will accept the following “simplified” method for “plain vanilla” options consistent with those in the fact set above:  $\text{expected term} = ((\text{vesting term} + \text{original contractual term}) / 2)$ . Assuming a ten year original contractual term and graded vesting over four years (25% of the options in each grant vest annually) for the share options in the fact set described above, the resultant expected term would be 6.25 years.<sup>72</sup> Academic research on the exercise of options issued to executives provides some general support for outcomes that would be produced by the application of this method.<sup>73</sup>

Examples of situations in which the staff believes that it may be appropriate to use this simplified method include the following:

---

<sup>72</sup> Calculated as  $(((1 \text{ year vesting term (for the first 25\% vested)} + 2 \text{ year vesting term (for the second 25\% vested)} + 3 \text{ year vesting term (for the third 25\% vested)} + 4 \text{ year vesting term (for the last 25\% vested)}) / 4 \text{ total years of vesting}) + 10 \text{ year contractual life}) / 2$ ; that is,  $((((1+2+3+4)/4) + 10) / 2 = 6.25$  years.

<sup>73</sup> J.N. Carpenter, “The exercise and valuation of executive stock options,” *Journal of Financial Economics*, 1998, pp.127-158 studies a sample of 40 NYSE and AMEX firms over the period 1979-1994 with share option terms reasonably consistent to the terms presented in the fact set and example. The mean time to exercise after grant was 5.83 years and the median was 6.08 years. The “mean time to exercise” is shorter than expected term since the study’s sample included only exercised options. Other research on executive options includes (but is not limited to) J. Carr Bettis; John M. Bizjak; and Michael L. Lemmon, “Exercise behavior, valuation, and the incentive effects of employee stock options,” *Journal of Financial Economics*, May 2005, pp. 445-470. One of the few studies on nonexecutive employee options the staff is aware of is S. Huddart, “Patterns of stock option exercise in the United States,” in: J. Carpenter and D. Yermack, eds., *Executive Compensation and Shareholder Value: Theory and Evidence* (Kluwer, Boston, MA, 1999), pp. 115-142.

- A company does not have sufficient historical exercise data to provide a reasonable basis upon which to estimate expected term due to the limited period of time its equity shares have been publicly traded.
- A company significantly changes the terms of its share option grants or the types of employees that receive share option grants such that its historical exercise data may no longer provide a reasonable basis upon which to estimate expected term.
- A company has or expects to have significant structural changes in its business such that its historical exercise data may no longer provide a reasonable basis upon which to estimate expected term.

The staff understands that a company may have sufficient historical exercise data for some of its share option grants but not for others. In such cases, the staff will accept the use of the simplified method for only some but not all share option grants. The staff also does not believe that it is necessary for a company to consider using a lattice model before it decides that it is eligible to use this simplified method. Further, the staff will not object to the use of this simplified method in periods prior to the time a company's equity shares are traded in a public market.

If a company uses this simplified method, the company should disclose in the notes to its financial statements the use of the method, the reason why the method was used, the types of share option grants for which the method was used if the method was not used for all share option grants, and the periods for which the method was used if the method was not used in all periods. Companies that have sufficient historical share option exercise experience upon which to estimate expected term may not apply this simplified method. In addition, this simplified method is not intended to be applied as a benchmark in evaluating the appropriateness of more refined estimates of expected term.



The staff does not expect that such a simplified method would be used for share option grants when more relevant detailed information is available to the company.

### **3. Current Price of the Underlying Share (Including Considerations for Spring-Loaded Grants)**

FASB ASC paragraph 718-10-55-21 states that “if an observable market price is not available for a share option or similar instrument with the same or similar terms and conditions, an entity shall estimate the fair value of that instrument using a valuation technique or model that meets the requirements in paragraph 718-10-55-11,” and requires such valuation technique or model to take into account, at a minimum a number of factors including the current price of the underlying share.

FASB ASC paragraph 718-10-55-27 states, “Assumptions used to estimate the fair value of equity and liability instruments granted in share-based payment transactions shall be determined in a consistent manner from period to period. For example, an entity might use the closing share price or the share price at another specified time as the current share price on the grant date in estimating fair value, but whichever method is selected, it shall be used consistently.”

For a valuation technique to be consistent with the fair value measurement objective and the other requirements of Topic 718, the staff believes that a consistently applied method to determine the current price of the underlying share should include consideration of whether adjustments to observable market prices (e.g., the closing share price or the share price at another specified time) are required. Such adjustments may be required, for example, when the observable market price does not reflect certain material non-public information known to the company but unavailable to marketplace participants at the time the market price is observed.

Determining whether an adjustment to the observable market price is necessary, and if so, the magnitude of any adjustment, requires significant judgment. The staff acknowledges that

companies generally possess non-public information when entering into share-based payment transactions. The staff believes that an observable market price on the grant date is generally a reasonable and supportable estimate of the current price of the underlying share in a share-based payment transaction, for example, when estimating the grant-date fair value of a routine annual grant to employees that is not designed to be spring-loaded.

However, companies should carefully consider whether an adjustment to the observable market price is required, for example, when share-based payments arrangements are entered into in contemplation of or shortly before a planned release of material non-public information, and such information is expected to result in a material increase in share price. The staff believes that non-routine spring-loaded grants merit particular scrutiny by those charged with compensation and financial reporting governance. Additionally, when a company has a planned release of material non-public information within a short period of time after the measurement date of a share-based payment, the staff believes a material increase in the market price of the company's shares upon release of such information indicates marketplace participants would have considered an adjustment to the observable market price on the measurement date to determine the current price of the underlying share.

**Facts:** Company D is a public company that entered into a material contract with a customer after market close. Subsequent to entering into the contract but before the market opens the next trading day, Company D awards share options to its executives. The share option award is non-routine, and the award is approved by the Board of Directors in contemplation of the material contract. Company D expects the share price to increase significantly once the announcement of the contract is made the next day. Company D's accounting policy is to consistently use the closing share price on the day of the grant as the current share price in estimating the grant-date fair value of share options.

**Question 1:** Should Company D make an adjustment to the closing share price to determine the current price of shares underlying share options?

**Interpretive Response:** Prior to awarding share options in this fact pattern, the staff expects Company D to consider whether such awards are consistent with its policies and procedures, including the terms of the compensation plan approved by shareholders, other governance policies, and legal requirements. The staff reminds companies of the importance of strong corporate governance and controls in granting share options, as well as the requirements to maintain effective internal control over financial reporting and disclosure controls and procedures.

In estimating the grant-date fair value of share options in this fact pattern, absent an adjustment to the closing share price to reflect the impact of Company D's new material contract with a customer, the staff believes the closing share price would not be a reasonable and supportable estimate and, without an adjustment the valuation of the award would not meet the fair value measurement objective of FASB ASC Topic 718 because the closing share price would not reflect a price that is unbiased for marketplace participants at the time of the grant.<sup>74</sup>

**Question 2:** What disclosures would the staff expect Company D to include in its financial statements regarding its determination of the current price of shares underlying newly-granted share options?

**Interpretive Response:** FASB ASC paragraph 718-10-50-1 requires disclosure of information that enables users of the financial statements to understand, among other things, the nature and terms of share-based payment arrangements that existed during the period and the potential effects of those arrangements on shareholders. FASB ASC paragraph 718-10-50-2 prescribes the minimum information needed to achieve the Topic's disclosure objectives, including a

---

<sup>74</sup> FASB ASC paragraph 718-10-55-13.

description of the method used and significant assumptions used to estimate the fair value of awards under share-based payment arrangements.

Accordingly, the staff expects that, at a minimum, Company D would disclose in a footnote to its financial statements how it determined the current price of shares underlying share options for purposes of determining the grant-date fair value of its share options in accordance with FASB ASC Topic 718. For example, the staff would expect Company D to disclose its accounting policy related to how it identifies when an adjustment to the closing price is required, how it determined the amount of the adjustment to the closing share price, and any significant assumptions used to determine such adjustment, if material. Further, the characteristics of the share options, including their spring-loaded nature, may differ from Company D's other share-based payment arrangements to such an extent Company D should disclose information regarding these share options separately from other share-based payment arrangements to allow investors to understand Company D's use of share-based compensation.<sup>75</sup>

Additionally, Company D should consider the applicability of MD&A and other disclosure requirements, including those related to liquidity and capital resources, results of operations, critical accounting estimates, executive compensation, and transactions with related persons.<sup>76</sup>

#### **E. FASB ASC Topic 718, Compensation — Stock Compensation, and Certain Redeemable Financial Instruments**

Certain financial instruments awarded in conjunction with share-based payment arrangements have redemption features that require settlement by cash or other assets upon the occurrence of events that are outside the control of the issuer.<sup>77</sup> FASB ASC Topic 718 provides guidance for

---

<sup>75</sup> ASC 718-10-50-1 and 718-10-50-2(g)

<sup>76</sup> Items 303, 402, and 404 of Regulation S-K

<sup>77</sup> The terminology "outside the control of the issuer" is used to refer to any of the three redemption conditions described in Rule 5-02.27 of Regulation S-X that would require classification outside permanent equity. That rule requires preferred securities that are redeemable for cash or other assets to be classified outside of permanent equity

determining whether instruments granted in conjunction with share-based payment arrangements should be classified as liability or equity instruments. Under that guidance, most instruments with redemption features that are outside the control of the issuer are required to be classified as liabilities; however, some redeemable instruments will qualify for equity classification.<sup>78</sup> SEC Accounting Series Release No. 268, Presentation in Financial Statements of “Redeemable Preferred Stocks,”<sup>79</sup> (“ASR 268”) and related guidance<sup>80</sup> address the classification and measurement of certain redeemable equity instruments.

**Facts:** Under a share-based payment arrangement, Company F grants to an employee shares (or share options) that all vest at the end of four years (cliff vest). The shares (or shares underlying the share options) are redeemable for cash at fair value at the holder’s option, but only after six months from the date of share issuance (as defined in FASB ASC Topic 718). Company F has determined that the shares (or share options) would be classified as equity instruments under the guidance of FASB ASC Topic 718. However, under ASR 268 and related guidance, the instruments would be considered to be redeemable for cash or other assets upon the occurrence of events (*e.g.*, redemption at the option of the holder) that are outside the control of the issuer.

**Question 1:** While the instruments are subject to FASB ASC Topic 718, is ASR 268 and related guidance applicable to instruments issued under share-based payment arrangements that are classified as equity instruments under FASB ASC Topic 718?

**Interpretive Response:** Yes. The staff believes that registrants must evaluate whether the terms of instruments granted in conjunction with share-based payment arrangements that are not classified as liabilities under FASB ASC Topic 718 result in the need to present certain amounts

---

if they are redeemable (1) at a fixed or determinable price on a fixed or determinable date, (2) at the option of the holder, or (3) upon the occurrence of an event that is not solely within the control of the issuer.

<sup>78</sup> FASB ASC paragraphs 718-10-25-6 through 718-10-25-19A.

<sup>79</sup> ASR 268, July 27, 1979, Rule 5-02.27 of Regulation S-X.

<sup>80</sup> Related guidance includes EITF Topic No. D-98, *Classification and Measurement of Redeemable Securities*, included in the FASB ASC in paragraph 480-10-S99-3A.

outside of permanent equity (also referred to as being presented in “temporary equity”) in accordance with ASR 268 and related guidance.<sup>81</sup>

When an instrument ceases to be subject to FASB ASC Topic 718 and becomes subject to the recognition and measurement requirements of other applicable GAAP, the staff believes that the company should reassess the classification of the instrument as a liability or equity at that time and consequently may need to reconsider the applicability of ASR 268.

**Question 2:** How should Company F apply ASR 268 and related guidance to the shares (or share options) granted under the share-based payment arrangements with employees that may be unvested at the date of grant?

**Interpretive Response:** Under FASB ASC Topic 718, when compensation cost is recognized for instruments classified as equity instruments, additional paid-in-capital<sup>82</sup> is increased. If the award is not fully vested at the grant date, compensation cost is recognized and additional paid-in-capital is increased over time as services are rendered over the requisite service period. A similar pattern of recognition should be used to reflect the amount presented as temporary equity for share-based payment awards that have redemption features that are outside the issuer’s control but are classified as equity instruments under FASB ASC Topic 718. The staff believes Company F should present as temporary equity at each balance sheet date an amount that is

---

<sup>81</sup> Instruments granted in conjunction with share-based payment arrangements with employees that do not by their terms require redemption for cash or other assets (at a fixed or determinable price on a fixed or determinable date, at the option of the holder, or upon the occurrence of an event that is not solely within the control of the issuer) would not be assumed by the staff to require net cash settlement for purposes of applying ASR 268 in circumstances in which FASB ASC Section 815-40-25, Derivatives and Hedging — Contracts in Entity’s Own Equity — Recognition, would otherwise require the assumption of net cash settlement. See FASB ASC paragraph 815-40-25-11 (See FASB ASC paragraph 815-10-65-1 for the transition and effective date information related to FASB ASU No. 2020-06, *Debt—Debt with Conversion and Other Options (Subtopic 470-20) and Derivatives and Hedging—Contracts in Entity’s Own Equity (Subtopic 815-40)*: Accounting for Convertible Instruments and Contracts in an Entity’s Own Equity, which superseded FASB ASC paragraph 815-40-25-11.), which states, in part: “...the events or actions necessary to deliver registered shares are not controlled by an entity and, therefore, except under the circumstances described in FASB ASC paragraph 815-40-25-16, if the contract permits the entity to net share or physically settle the contract only by delivering registered shares, it is assumed that the entity will be required to net cash settle the contract.” See also FASB ASC subparagraph 718-10-25-15(a).

<sup>82</sup> Depending on the fact pattern, this may be recorded as common stock and additional paid in capital.

based on the redemption amount of the instrument, but takes into account the proportion of consideration received in the form of employee services. Thus, for example, if a nonvested share that qualifies for equity classification under FASB ASC Topic 718 is redeemable at fair value more than six months after vesting, and that nonvested share is 75% vested at the balance sheet date, an amount equal to 75% of the fair value of the share should be presented as temporary equity at that date. Similarly, if an option on a share of redeemable stock that qualifies for equity classification under FASB ASC Topic 718 is 75% vested at the balance sheet date, an amount equal to 75% of the intrinsic<sup>83</sup> value of the option should be presented as temporary equity at that date.

**Question 3:** Would the methodology described for employee awards in the Interpretive Response to Question 2 above apply to nonemployee awards to be issued in exchange for goods or services with similar terms to those described above?

**Interpretive Response:** The staff believes it would generally be appropriate to apply the methodology described in the Interpretive Response to Question 2 above to nonemployee awards.

## **F. Classification of Compensation Expense Associated with Share-Based Payment Arrangements**

**Facts:** Company G utilizes both cash and share-based payment arrangements to compensate its employees and nonemployee service providers. Company G would like to emphasize in its income statement the amount of its compensation that did not involve a cash outlay.

---

<sup>83</sup> The potential redemption amount of the share option in this illustration is its intrinsic value because the holder would pay the exercise price upon exercise of the option and then, upon redemption of the underlying shares, the company would pay the holder the fair value of those shares. Thus, the net cash outflow from the arrangement would be equal to the intrinsic value of the share option. In situations where there would be no cash inflows from the share option holder, the cash required to be paid to redeem the underlying shares upon the exercise of the put option would be the redemption value.

**Question:** How should Company G present in its income statement the non-cash nature of its expense related to share-based payment arrangements?

**Interpretive Response:** The staff believes Company G should present the expense related to share-based payment arrangements in the same line or lines as cash compensation paid to the same employees or nonemployees.<sup>84</sup> The staff believes a company could consider disclosing the amount of expense related to share-based payment arrangements included in specific line items in the financial statements. Disclosure of this information might be appropriate in a parenthetical note to the appropriate income statement line items, on the cash flow statement, in the footnotes to the financial statements, or within MD&A.

**G. Removed by SAB 114**

**H. Removed by SAB 114**

### **I. Capitalization of Compensation Cost Related to Share-Based Payment Arrangements**

**Facts:** Company K is a manufacturing company that grants share options to its production employees. Company K has determined that the cost of the production employees' service is an inventoriable cost. As such, Company K is required to initially capitalize the cost of the share option grants to these production employees as inventory and later recognize the cost in the income statement when the inventory is consumed.<sup>85</sup>

**Question:** If Company K elects to adjust its period end inventory balance for the allocable amount of share-option cost through a period end adjustment to its financial statements, instead

---

<sup>84</sup> FASB ASC Topic 718 does not identify a specific line item in the income statement for presentation of the expense related to share-based payment arrangements, with the exception of the guidance in ASC 718-10-15-5A on share-based payment awards granted to a customer.

<sup>85</sup> FASB ASC paragraph 718-10-25-2A.



of incorporating the share-option cost through its inventory costing system, would this be considered a deficiency in internal controls?

**Interpretive Response:** No. FASB ASC Topic 718, Compensation — Stock Compensation, does not prescribe the mechanism a company should use to incorporate a portion of share-option costs in an inventory-costing system. The staff believes Company K may accomplish this through a period end adjustment to its financial statements. Company K should establish appropriate controls surrounding the calculation and recording of this period end adjustment, as it would any other period end adjustment. The fact that the entry is recorded as a period end adjustment, by itself, should not impact management's ability to determine that the internal control over financial reporting, as defined by the SEC's rules implementing Section 404 of the Sarbanes-Oxley Act of 2002,<sup>86</sup> is effective.

**J. Removed by SAB 114**

**K. Removed by SAB 114**

**L. Removed by SAB 114**

**M. Removed by SAB 114**

\*\*\*\*\*

---

<sup>86</sup> Release No. 34-47986, June 5, 2003, Management's Report on Internal Control Over Financial Reporting and Certification of Disclosure in Exchange Act Period Reports.

## TOPIC 5: MISCELLANEOUS ACCOUNTING

\*\*\*\*\*

### T. Accounting for Expenses or Liabilities Paid by Principal Stockholder(s)

**Facts:** Company X was a defendant in litigation for which the company had not recorded a liability in accordance with FASB ASC Topic 450, Contingencies. A principal stockholder<sup>34</sup> of the company transfers a portion of his shares to the plaintiff to settle such litigation. If the company had settled the litigation directly, the company would have recorded the settlement as an expense.

**Question:** Must the settlement be reflected as an expense in the company's financial statements, and if so, how?

**Interpretive Response:** Yes. The value of the shares transferred should be reflected as an expense in the company's financial statements with a corresponding credit to contributed (paid-in) capital.

The staff believes that such a transaction is similar to those described in FASB ASC paragraph 718-10-15-4 (Compensation — Stock Compensation Topic), which states that “share-based payments awarded to a grantee by a related party or other holder of an economic interest<sup>35</sup> in the entity as compensation for goods or services provided to the reporting entity are share-based payment transactions to be accounted for under this Topic unless the transfer is clearly for a purpose other than compensation for goods or services to the reporting entity.” As explained in this paragraph, the substance of such a transaction is that the economic interest holder makes a

---

<sup>34</sup> The FASB ASC Master Glossary defines principal owners as “owners of record or known beneficial owners of more than 10 percent of the voting interests of the enterprise.”

<sup>35</sup> The FASB ASC Master Glossary defines an economic interest in an entity as “any type or form of pecuniary interest or arrangement that an entity could issue or be a party to, including equity securities; financial instruments with characteristics of equity, liabilities or both; long-term debt and other debt-financing arrangements; leases; and contractual arrangements such as management contracts, service contracts, or intellectual property licenses.” Accordingly, a principal stockholder would be considered a holder of an economic interest in an entity.

capital contribution to the reporting entity, and the reporting entity makes a share-based payment to its grantee in exchange for goods or services provided to the reporting entity.

The staff believes that the problem of separating the benefit to the principal stockholder from the benefit to the company cited in FASB ASC Topic 718 is not limited to transactions involving stock compensation. Therefore, similar accounting is required in this and other<sup>36</sup> transactions where a principal stockholder pays an expense for the company, unless the stockholder's action is caused by a relationship or obligation completely unrelated to his position as a stockholder or such action clearly does not benefit the company.

Some registrants and their accountants have taken the position that since FASB ASC Topic 850, Related Party Disclosures, applies to these transactions and requires only the disclosure of material related party transactions, the staff should not analogize to the accounting called for by FASB ASC paragraph 718-10-15-4 for transactions other than those specifically covered by it. The staff notes, however, that FASB ASC Topic 850 does not address the measurement of related party transactions and that, as a result, such transactions are generally recorded at the amounts indicated by their terms.<sup>37</sup> However, the staff believes that transactions of the type described above differ from the typical related party transactions.

The transactions for which FASB ASC Topic 850 requires disclosure generally are those in which a company receives goods or services directly from, or provides goods or services directly to, a related party, and the form and terms of such transactions may be structured to produce

---

<sup>36</sup> For example, SAB Topic 1.B indicates that the separate financial statements of a subsidiary should reflect any costs of its operations which are incurred by the parent on its behalf. Additionally, the staff notes that AICPA Technical Practice Aids §4160 also indicates that the payment by principal stockholders of a company's debt should be accounted for as a capital contribution.

<sup>37</sup> However, in some circumstances it is necessary to reflect, either in the historical financial statements or a pro forma presentation (depending on the circumstances), related party transactions at amounts other than those indicated by their terms. Two such circumstances are addressed in Staff Accounting Bulletin Topic 1.B.1, Questions 3 and 4. Another example is where the terms of a material contract with a related party are expected to change upon the completion of an offering (i.e., the principal shareholder requires payment for services which had previously been contributed by the shareholder to the company).

either a direct or indirect benefit to the related party. The participation of a related party in such a transaction negates the presumption that transactions reflected in the financial statements have been consummated at arm's length. Disclosure is therefore required to compensate for the fact that, due to the related party's involvement, the terms of the transaction may produce an accounting measurement for which a more faithful measurement may not be determinable.

However, transactions of the type discussed in the facts given do not have such problems of measurement and appear to be transacted to provide a benefit to the stockholder through the enhancement or maintenance of the value of the stockholder's investment. The staff believes that the substance of such transactions is the payment of an expense of the company through contributions by the stockholder. Therefore, the staff believes it would be inappropriate to account for such transactions according to the form of the transaction.

\*\*\*\*\*

\*\*\*\*\*

[FR Doc. 2021-26027 Filed: 11/30/2021 8:45 am; Publication Date: 12/1/2021]